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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/479,245	01/07/2000	ETSURO KISHI	684.2954	2818

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EXAMINER	
LAO, LUN YI	
ART UNIT	PAPER NUMBER
2673	

DATE MAILED: 03/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/479,245	Applicant(s) Etsuro Kishi et al
	Examiner Lao, Lun-yi	Art Unit 2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 11, 2002*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above, claim(s) *2* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1 and 3-12* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claims 7-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ota(3,792,308).

As to claims 7-9 and 11, Ota teaches an electrophoretic display device comprising two electrodes(8, 9); fixing surfaces each associated with one of the two electrodes or charged films(8,9); an electrophoretic layer(suspension layer, 2) disposed in a cell and having an insulating liquid(7) and a colored charged particles disposed in the electrophoretic layer(suspension layer, 2) and voltage supply means(10) for applying a voltage between the electrodes(8,9)(see figures 1a-1c; column 2, lines 45-68; column 3, lines 1-25; column 6, lines 67-68 and column 7, lines 1-23). When a voltage is applied between the electrodes(8,9), the colored charged particles(6) is provided with an adhesive layer(43) allowing repetitive attachment thereto and separation

therefrom of the color charged particles(6)(see figures 1a-1c, 11; column 6, lines 67-68; column 7, lines 1-23 and column 17, lines 15-33).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota(3,792,308) in view of Albert et al(6,172,798).

Ota fails to place two electrodes(8,9) on a same plane so to allow the colored charged particles moving in an horizontal direction.

Albert et al teach an electrophoretic display having two electrodes(30, 40) mounted on the same plane(an horizontal plane)(see figures 1A, 1B and 3A-3D). When a voltage is applied to the two electrodes(30, 40), partials(50) are moving in an horizontal direction(see figures 1A, 1B and column 9, lines 27-61). It would have been obvious to have modified Ota with the teaching of Albert et al, since such a modification would have involved a mere changed in location of an electrodes and a changed location of an electrodes is generally recognized as being within the level of ordinary skill in the art.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota(3,792,308) in view of Albert et al(6,067,185).

Ota fails to disclose the insulating liquid has a volumetric resistivity of at least 10^{12} ohm.com.

Albert et al teach an electrophoretic display having an insulating liquid(17) with a volumetric resistivity about 10^{15} ohm.cm.(see figure 1 and column 15, lines 45-53). It would have been obvious to have modified Ota with the teaching of Albert et al, since displays of Ota and Albert et al both have insulating liquid and Albert's insulating liquid with 10^{15} ohm.cm. should be suitable for Ota's electrophoretic display.

6. Claims 1, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota(3,792,308) in view of Iijima et al(5,587,264).

Ota teaches an adhesive layer having a polymer(resin or polystyrol)(see figure 11 and column 17, lines 21-24). Ota fails to disclose the layer have a glass transition temperature of -35^0C to $+35^0$C.

Iijima et al teach a display having a layer(resin) made of a polymer having low glass transition temperature(see column 17, lines 25-68 and column 18, lines 1-38). It would have been obvious to have modified Ota with the teaching of Iijima et al, since the layers of Ota and Iijima et al made of same material(polymer).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota(3,792,308) in view of Iijima et al(5,587,264) and Albert et al(6,172,798).

Ota as modified fail to place two electrodes(8,9) on a same plane so to allow the colored charged particles moving in an horizontal direction.

Albert et al teach an electrophoretic display having two electrodes(30, 40) mounted on the same plane(an horizontal plane)(see figures 1A, 1B and 3A-3D). When a voltage is applied to the two electrodes(30, 40), partials(50) are moving in an horizontal direction(see figures 1A, 1B and column 9, lines 27-61). It would have been obvious to have modified Ota as modified with the teaching of Albert et al, since such a modification would have involved a mere changed in location of an electrodes and a changed location of an electrodes is generally recognized as being within the level of ordinary skill in the art.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota(3,792,308) in view of Iijima et al(5,587,264) and Albert et al(6,067,185).

Ota as modified fail to disclose the insulating liquid has a volumetric resistivity of at least 10^{12} ohm.com.

Albert et al teach an electrophoretic display having an insulating liquid(17) with a volumetric resistivity about 10^{15} ohm.cm.(see figure 1 and column 15, lines 45-53). It would have been obvious to have modified Ota with the teaching of Albert et al, since displays of Ota and Albert et al both have insulating liquid and Albert's insulating liquid with 10^{15} ohm.cm. should be suitable for Ota's electrophoretic display.

Conclusion

9. Applicant's arguments filed on February 11, 2002 have been fully considered but they are not persuasive.

Applicants argue that the filing data of Albert's patent(6,172,798) of May 15, 2000 is later than applicants' filing data of January 7, 2000 on page 6. However, the earliest filing data of Albert's patent(6,172,798) is April 27, 1998 which is earlier than applicant's filing data of January 7, 2000 and applicants' foreign prior data of January 8, 1999.

Applicants argue that Ota's adhesive layer does not comprising copolymers on page 7. The examiner disagrees with that since Ota's adhesive layer is made of copolymers(see figure 11 and column 17, lines 21-24).

Applicants argues that Iijima et al do not teach a resin layer(adhesive layer) contacting an insulating liquid in an electrophoretic display on page 7. However, Ota teaches a resin layer(adhesive layer 43) contacting an insulating liquid(7) in an electrophoretic display figures 1a, 11; column 2, lines 53-57 and column 17, lines 21-24).

Applicants argue that Ota or Iijima et al do not have a charged film having a constant surface charge of a polarity opposite to that of colored charged particles on page 8. The examiner disagrees with that Ota teaches a charged film(8) having a constant surface charge of a positive polarity opposite to the colored charged particles(negative charge)(see figure 1b; column 2, lines 65-68 and column 3, lines 1-25).

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington,

VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

March 11, 2002
Lun-yi Lao

Lun-Yi Lao
Primary Examiner